

January 28, 2005

Ms. Diane Wahl County of Ventura Environmental Health Division, LUFT Program 800 South Victoria Avenue Ventura CA 93009-1730

Subject:

**Bauer and Collins Property** 

1140 South Wells Road, Saticoy

EHD Site #C01033

QUARTERLY MONITORING REPORT (Quarter Ending December 31, 2004)

Dear Ms. Wahl:

PW Environmental prepared this Quarterly Monitoring Report for the property located at 1140 South Wells Road, Saticoy, on behalf Mr. John Bauer and Ms. Patti Collins, responsible parties. Quarterly monitoring services were provided in compliance with the County of Ventura Environmental Health Division, Leaking Underground Fuel Tank Program letters dated October 4, 2002, and March 30, 2004. PW conducted this quarterly monitoring event on December 22, 2004. The work included measuring depth to water, calculating groundwater elevations, purging, and sampling four of four site wells (MW1 through MW4). The samples plus a duplicate and trip blank were submitted for analysis to a State-certified laboratory. The following report presents the work performed and findings.

PW trusts this report addresses your current requirements. Please contact the undersigned if you have questions or comments regarding this report.

Therese McCarthy-Watson

Robert C. Orlando, RG #45

ROBERT C. ORLAN

**Project Scientist** 

Senior Geologist

Respectfully submitted,

PW ENVIRONMENTAL

Senior Staff Geologist

cc: Mr. John Bauer, RP

Ms. Patti Collins, RP

Mr. Dan Ortiz (site owner) c/o Short Realty

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### QUARTERLY MONITORING REPORT QUARTER ENDING DECEMBER 31, 2004

### BAUER AND COLLINS PROPERTY 1140 SOUTH WELLS ROAD, SATICOY, CALIFORNIA EHD SITE #C01033

### 1.0 WORK PERFORMED

On December 22, 2004, PW Environmental (PW) conducted monitoring and sampling of four of four site wells (MW1 through MW4). A duplicate groundwater sample was collected from well MW3R. Groundwater samples were submitted for analysis under Chain-of-Custody protocols to Columbia Analytical Services of Canoga Park.

### 2.0 CURRENT SITE ACTIVITIES

In a letter dated January 8, 2004, County of Ventura Environmental Health Division, Leaking Underground Fuel Tank Program (EHD) notified the responsible party (RP) that the site was to be evaluated for low-risk closure eligibility. In a subsequent letter dated March 30, 2004, EHD directed that corrective action be performed in the source area to remove the residual hydrocarbons in the soil to further protect groundwater and public supply wells located approximately 60 feet down and cross gradient from the site. Until completion of the corrective action, EHD directed that the existing quarterly monitoring program continue at the site. In response, PW prepared Corrective Action Plan (CAP), dated May 24, 2004, that was approved by EHD in their letter, dated June 21, 2004. The approved CAP for source-soil removal, with conditions, was initiated on August 26, 2004, with the abandonment of groundwater monitoring well MW3.

PW Environmental (PW) performed remedial excavation activities at the site between September 10, and December 9, 2004. On December 3, 2004, PW installed monitoring well MW3R to replace abandoned well MW3, for the subsequent quarterly monitoring event. Site description and background are presented in Appendix A.

### 3.0 FINDINGS

Well survey, hydrologic, and Global Positioning System location data obtained for the wells are presented in Table 1. Historical groundwater elevation and flow data are presented in Table 2. Laboratory analytical results for the groundwater samples collected for this event are summarized in Table 3. Historical laboratory analytical results for the site wells are presented along with the measured groundwater elevations in Table 4. Field methods, site background, and groundwater sampling protocol are presented in Appendix A. A data graph of historical groundwater elevations is in Appendix B. The Monitoring Well Field Data sheet and laboratory analytical results for the samples collected for this event are presented in Appendix C. A site



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location map is presented in Figure 1. The groundwater gradient map is presented in Figure 2. A benzene isoconcentration map is presented in Figure 3. A discussion of the groundwater conditions observed during the fieldwork, the calculated groundwater gradient, and the laboratory analytical results for the groundwater samples is presented.

### 3.1 GROUNDWATER CONDITIONS

For this quarterly event, the measured depth to groundwater at the site ranged from 6.49 (MW1) to 8.42 (MW3R) feet below the top of the well casing. Groundwater elevations calculated for the wells were between 150.45 (MW3R) and 152.67 (MW1) feet above mean sea level. Historical groundwater elevations are shown in Graph 1 of Appendix B.

The groundwater flow direction and gradient were initially contoured using the computer program SURFER<sup>®</sup>, then modified as necessary based on interpretation of the data. Based on contouring of the groundwater elevations obtained from the site wells during this event, groundwater under the site generally flows to the south at a gradient of 0.071 (or 7.1 feet of vertical drop in 100 feet of horizontal distance). The estimated gradient is illustrated in Figure 2.

### 3.2 LABORATORY ANALYTICAL RESULTS

Submitted laboratory samples were analyzed as presented in paragraph 13 of Groundwater Sampling Protocols (Appendix A). The laboratory analytical results indicate that concentrations of total petroleum hydrocarbons as gasoline (TPH-G), TPH as diesel (TPH-D), benzene, toluene, ethylbenzene, total xylenes (BTEX), and tertiary butyl alcohol (tBA) exceeding the Method Detection Limits employed by the laboratory were reported in select samples collected from the site wells. Of these, the benzene concentration in wells MW2 and MW4, along with the tBA concentrations in well MW3R exceeded the State Maximum Contaminant Levels for Drinking Water.

Contaminant graphs for TPH-G and benzene are presented in Graphs 2 and 3 of Appendix B.

### 4.0 DISCUSSION

Comparison of the water level measurements for this event, with those measured during the previous event, indicate that the groundwater elevation under the site fell between 0.63 (MW1) and 0.80 (MW4) feet. The groundwater under the site generally flows to the south at a gradient of 0.071.

Comparison of the laboratory analytical results reported for samples collected for this event are presented.



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Bauer and Collins Property, 4QM04
January 28, 2005

- In well MW1, located up gradient from the former underground storage tank (UST), concentrations of toluene and total xylenes increased.
- In well MW2, located cross gradient from the former UST, concentrations of TPH-G and BTEX increased.
- In well MW3R, located down gradient from the former UST, concentrations of TPH-G, TPH-D, BTEX, and tBA increased compared to data collected for MW3.
- In well MW4, located down gradient from the former UST, concentrations of TPH-G and BTEX increased.

### **5.0 RECOMENDATIONS**

- Following completion of the first quarter 2005 groundwater monitoring event, anticipated to be completed in early March 2005, PW recommends that the site be evaluated and considered for a low-risk soil closure;
- If TPH-G and tBA concentrations persist, hydrogen peroxide treatment, a site polishing method, of the site wells may be warranted prior to closure; and,
- Dissolved lead concentrations have been at or below method detection limits and background levels since January 2003. PW recommends termination of dissolved lead analysis.

### 6.0 LIMITATIONS

Project limitations are presented in Appendix D.

TABLE 1

## WELL CONSTRUCTION, HYDROLOGIC, AND GPS DATA FOR DECEMBER 22, 2004 BAUER & COLLINS PROPERTY, SATICOY **EHD SITE #C01033**

		WEL	WELL CONSTRUCT	TION DATA		HYDROLC	HYDROLOGIC DATA	GPS DATA	ATA
Number	Date Installed	Total Depth (ft btc)	Casing Diameter (inches)	Screened Interval (ft btc)	Top of Casing (ft amsl)	Groundwater Depth (ft btc)	Groundwater Elevation (ft amsl)	Latitude Longitude Degrees North Degrees West	Longitude Degrees West
MW1	1/21/03	18	2	3 – 18	159.16	6.49	152.67	34.2842149	119.15084
MW2	1/21/03	20	2	5 – 20	158.96	6.92	152.04	34.2841796	119.15084
MW3R	1/21/03	18	2	3 – 18	158.87	8.42	150.45	34.2841541	119.15080
MW4	1/22/03	18	2	3 – 18	159.48	7.85	151.63	34.2841587	119.15071

Geocation performed GPS location services on February 2, 2003.

btc ams

below top of casing above mean sea level

TABLE 2

### HISTORICAL GROUNDWATER ELEVATION AND FLOW DATA BAUER & COLLINS PROPERTY, SATICOY EHD SITE #C01033

Date of Monitoring Event		Groundwater El	Groundwater Elevations (ft asml)		Approximate Gr	Approximate Groundwater flow Data
	IMW	MW2	MW3R	MW4	Gradient	Direction
01/21/03	154.65	154.19	153.58	153.82	0.040	South
04/21/03	156.32	156.09	155.29	155.19	0.040	South
07/08/03	154.85	154.09	153.36	153.92	0.050	South
10/13/03	152.06	152.15	151.56	152.07	0.025	South
01/14/04	154.42	154.01	153.24	153.56	0.075	Southwest
04/01/04	155.18	154.94	153.95	153.28	0.052	Southeast
07/02/04	153.30	152.74	151.24	152.43	0.083	South
12/22/04	152.67	152.04	150.45	151.63	0.071	South
Change	-0.63	-0.70	-0.79	08'0-		
TOS	156.16	123.96	155.87	156.48		

The top-of-casing for MW1 surveyed to relative datum by Hoover and Associates. Information modified to reflect YCE Civil Engineering and Land Surveying's revised site map dated 3/11/2003.

amsl TOS Change

above mean sea level Top of Screen Difference in groundwater elevation from last quarterly monitoring event

TABLE 3

### SUMMARY OF GROUNDWATER ANALYTICAL RESULTS FOR DECEMBER 22, 2004 BAUER & COLLINS PROPERTY, SATICOY **EHD SITE #C01033**

AWU         TPH-G         TPH-D         A         T         E         X         MtB E         tBA         TP PP PP           MW1         C-35.00         C-410.00         1.20         5.20         C-0.15         0.99         C-0.32         C-11.00         C-0.27           MW3R         T30.00         470.00         1.20         5.20         0.77         7.00         C-0.32         C-11.00         C-0.27           MW4         110.00         C-410.00         8.30         28.00         3.20         25.00         C-0.32         50.00         C-0.27           DUP         ma         na         0.25         0.58         0.53         0.08         C-0.32         C-11.00         C-0.27           MDL         x												
<35.00	Sample ID	тен-с	трн-D	B		띮	×	MtBE	tBA	DIPE	EtBE	tAME
47.00 <sup>1</sup> <410.00 <sup>1</sup> 1.20         5.20         0.77         7.00         <0.32	MW1	<35.00	<410.00	<0.17	:	:	0.99	<0.32	<11.00	<0.27	<0.29	<0.27
730.00         470.00¹         0.25¹         0.38¹         0.26¹         0.27³         <0.32	MW2	47.00 <sup>J</sup>		1.20				<0.32	<11.00	<0.27	<0.29	<0.27
110.00	MW3R	730.00	470.00 <sup>J</sup>	0.25			0.73	<0.32		<0.27	<0.29	<0.27
na         na         0.26 <sup>1</sup> 0.53 <sup>1</sup> 0.31 <sup>1</sup> 0.98 <sup>1</sup> <0.32	MW4	110.00		8.30	,		25.00	<0.32	<11.00	<0.27	<0.29	<0.27
Same   Same   Same   Co.17   Co.22   Co.16   Co.54   Co.32   Co.1100   Co.32	DUP	na	na	0.26	0.53			<0.32	53.00	<0.27	<0.29	<0.27
35.00 410.00 0.017 0.12 0.16 0.54 0.32 11.00 1.0	· TB	na	na				<0.54	<0.32		<0.27	<0.29	<0.27
1000.00 <sup>4</sup> 1000.00 <sup>4</sup> 1.00 1.00 150.00 300.00 1750.00 13.00	MDL	35.00	410.00	0.17		1.		188	11.00	0.27	0.29	0.27
	MCL	1000.00	1000.00	1.00	150.00		36	13.00	12.00	Pa .	<b>[u</b>	<b>T</b>

not analyzed
MDLs are not listed for this constituent Reported in micrograms per liter (µg/L). Results at or above the MCLs are presented in Bold. Samples were analyzed by EPA Test Method 8015M, 8260B, and 7421. Ethyl tertiary-butyl ether Di-isopropyl ether Dissolved Lead Diss. Lead DIPE EtBE E Methyl tertiary-butyl ether Ethylbenzene Total xylenes **Foluene** B T E E MtBE tAME

Method Detection Limits employed by the laboratory. The MDLs may have been raised for sample containing elevated concentrations of contaminants. Maximum Containment Levels for water, California Regional Water Quality Control Board, September 12, 2003 MCL MCL

tertiary-amyl methyl ether

Trip Blank

No MCL listed for TPH-G. Values represent State Investigation levels.

No MCL listed for lead. Value represents State Action Level for tap water.

Estimated concentration. The results is less than the Practical Quantitation Limit but greater than the MDL.

Complete analytical results and chain of custody documentation are included in Appendix C.

TABLE 4

# SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS BAUER & COLLINS PROPERTY, SATICOY EHD SITE #C01033

Sample ID	Sample Date	Ground-water Elevation	TPH-G	TPH-D	<b>A</b>	Ŀ	用	×	MtBE	tBA	DIPE	EtBE	tAME	EDB	EDC	Diss. Lead
	01/21/03	154.59	<20.00	<280.00	<0.19	<0.17	<0.18	<0.40	<0.31	<3.30	<0.35	<0.28	<0.32	<0.17	<0.24	<0.07
	04/21/03	156.32	<19.00	<280.00	<0.19	<0.17	<0.18	<0.40	<0.31	<3.30	<0.35	<0.28	<0.32	<0.17	<0.24	<0.07
	07/08/03	154.85	30.00	<280.00	<0.19	<0.16	<0.18	2.70	<0.39	<4.50	<0.47	<0.38	<0.27	<0.19	<0.37	<0.07
	10/13/03	152.06	90.09	<280.00	2.70	9.70	1.30	9.40	<0.39	<4.50	<0.47	<0.38	<0.27	<0.19	<0.37	0.10
MW1	01/14/04	154.42	52.00	<440.00	3.20	8.90	1.30	6.40	<0.39	<10.00	<0.47	<0.39	<0.45	<0.15	<0.37	<0.07
	04/01/04	155.18	<19.00	<440.00	<0.16	<0.14	<0.20	<0.36	<0.39	<10.00	<0.47	<0.39	<0.45	<0.15	<0.37	0.08
	07/02/04	153.30	<19.00	<440.00	<0.16	0.17	<0.20	<0.36	<0.39	<10.00	<0.47	<0.39	<0.45	<0.15	<0.37	0.10
``	12/22/04	152.67	<35.00	<410.00	<0.17	0.62	<0.16	0.99	<0.32	<11.00	<0.27	<0.29	<0.27	na	na	na
	Change Fron	Change From Last Quarter	nc		nc	+	ou	+	DC	nc	ü	uc	ğ	20	١.	Вu
	01/21/03	154.13	30.00	<280.00	<0.19	<0.17	<0.18	<0.40	<0.31	<3.30	<0.35	<0.28	<0.32	<0.17	Ŷ	0.70
	04/21/03	156.09	<19.00	<280.00	<0.19	<0.17	<0.18	<0.40	<0.31	<3.30	<0.35	<0.28	<0.32	<0.17	<0.24	<0.07
	07/08/03	154.09	40.00	<280.00	<0.19	<0.16	<0.18	4.20	<0.39	<4.50	<0.47	<0.38	<0.27	<0.19	<0.37	<0.07
	10/13/03	152.15	30.00	<280.00	0.55	2.30	0.28	2.60	<0.39	<4.50	<0.47	<0.38	<0.27	<0.19	<0.37	0.10
MW2	01/14/04	154.01	43.00 <sup>1</sup>	<440.00	1.80	00.9	1.10	5.10	<0.39	<10.00	<0.47	<0.39	<0.45	<0.15	<0.37	<0.07
	04/01/04	154.94	<19.00	<440.00	<0.16	<0.14	<0.20	<0.36	<0.39	<10.00	<0.47	<0.39	<0.45	<0.15	<0.37	<0.07
	07/02/04	152.74	<19.00	<440.(	<0.16	<0.14	<0.20	<0.36	<0.39	<10.00	<0.47	<0.39	<0.45	<0.15	<0.37	0.07
	12/22/04	152.04	47.00	<410.00	1.20	5.20	0.77	7.00	<0.32	<11.00	<0.27	<0.29	<0.27	na	na	กล
	Change Fron	Change From Last Quarter	+	nc	+	+ ::::	+	+	nc	nc	nc	nc	nc	u "	JU	nc
	MDL		19.00	280.0	0.19	0.16	0.18	0.40	0.39	4.50	0.47	0.38	0.27	0.19	0.37	0.07
	MCL		1000.001 1000.00	1000.00	<b>1.00</b>	150.00	300.00	1750.00	13.00	12.00	[u	[u	[a	0.03	0.50	15.00

### TABLE 4 (continued)

### SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS BAUER & COLLINS PROPERTY, SATICOY **EHD SITE #C01033**

Sample ID	Sample Date	Ground-water Elevation	TPH-G	TPH-D	<b>A</b>	H	ĸ	×	MtBE	tBA	DIPE	EABE	tAME	EDB	EDC	Diss. Lead
	01/21/03	153.52	<20.00	<280.00	<0.19	<0.17	<0.18	<0.40	<0.31	<3.30	<0.35	<0.28	<0.32	<0.17	5.30	<0.07
	04/21/03	155.29	<19.00	<280.00	<0.19	<0.17	<0.18	<0.40	4.80	<0.17	<0.31	<3.30	<0.32	<0.28	<0.35	<0.07
	07/08/03	153.36	25.00 <sup>1</sup>	<280.00	<0.19	<0.16	<0.18	0.76	<0.37	<0.19	<0.39	<4.50	<0.27	<0.38	<0.47	<0.07
MW3	10/13/03	151.56	26.00	<280.00	1.10	0.16	0.24	2.00	<0.39	<4.50	<0.47	<0.38	<0.27	<0.19	3.60	0.10
	01/14/04	153.24	38.00 <sup>1</sup>	<440.00	1.40	4.60	0.82	4.30	<0.39	<10.00	<0.47	<0.39		<0.15	3.60	0°07
	04/01/04	153.95	22.00 <sup>J</sup>	<440.00	<0.16	<0.14	<0.20	<0.36	<0.39	<10.00	<0.47	<0.39	<0.45	<0.15	2.20	<0.07
	07/02/04	151.24	<19.00	<440.00	<0.16	<0.14	<0.20	<0.36	<0.39	<10.00	<0.47	<0.39	<0.45	<0.15	4.20	<0.07
						Well MW3	V3 Aband	Abandoned on	August 26, 2004	6, 2004						
MW3R	12/22/04	150.45	730.00	470,00 1	0.25	0.38	0.26	$0.73^{1}$	<0.32	50.00	<0.27	<0.29	<0.27	na	па	2
	Change Fron	Change From Last Quarter	+	+	+	+	+	+	nc	Ŧ	ğ	Ĭ			۽	Ē
,	01/21/03	153.76	<20.00	<280.00	<0.19	<0.17	<0.18	<0.40	<0.31	<3.30	<0.35	<0.28	V	0>	<0.24	<0.0>
	04/21/03	155.19	<19.00	<280.00	<0.19	<0.17	<0.18	<0.40	<0.31	<3.30	<0.35	<0.28		<0.17	<0.24	<b>∠</b> 0.0>
	07/08/03	153.92	37.00	<280.00	<0.19	<0.16	<0.18	3.60	<0.39	<4.50	<0.47	<0.38	<0.27	<0.19	<0.37	<0.07
	10/13/03	152.07	48.00	<280.00	0.97	4.10	09.0	4.90	<0.39	<4.50	<0.47	<0.38	<0.27	<0.19	<0.37	0.10
MW4	01/14/04	153.56	75.00	<440.00	3.70	13.00	2.30	11.00	<0.39	<10.00	<0.47	<0.39	<0.45	<0.15	<0.37	0.20
	04/01/04	153.28	<19.00	<440.00	<0.16	<0.14	<0.20	<0.36	<0.39	<10.00	<0.47	<0.39	<0.45	<0.15	<0.37	0.10
	07/02/04	152.43	<19.00	<440.00	<0.16	0.48	<0.20	<0.36	<0.39	<10.00	<0.47	<0.39	<0.45	<0.15	<0.37	<0.07
	12/22/04	151.53	110.00	<410.00	8.30	28.00	3.20	25.00	<0.32	<11.00	<0.27	<0.29	<0.27	па	eg .	na
	Change Fron	Change From Last Quarter	+	nc	+	+	+	+	nc	nc	ou.	ou	ou .	DC	ЭE	ě
	MDL		19.00	280.00	0.19	0.16	0.18	0.40	0.39	4.50	0.47	0.38	0.27	0.19	0.37	0.07
	MCL		1000.001	1000.000 1000.000	1.00	150.00	300.00	300.00 1750.00	13.00	12.00	u	u	Tu .	0.02	0.50	15.00
														ĺ		

Reported in micrograms per liter (µg/L). Results at or above the MCLs are presented in Bold. Samples were analyzed by EPA Test Method 8015M, 8260B, and 7421. Method Detection Limits employed by the laboratory. The MDLs may have been raised for sample containing elevated concentrations of contaminants.

Maximum Containment Levels for water, California Regional Water Quality Control Board, September 12, 2003

No MCL listed for TPH-G or TPH-D. Values represent State Investigation levels. MDL MCL a) b) J TPH-G

No MCL listed for lead. Value represents State Action Level for tap water.

Estimated concentration. The results is less than the Practical Quantitation Limit but greater than the MDI.

fotal petroleum hydrocarbons as gasoline - quantified against a gasoline standard

Benzene

**Ethylbenzene Toluene** 

Ethylene Dibromide ,2-Dichloroethane EDC

Total xylenes

Methyl tertiary-butyl ether tertiary-butyl alcohol MtBE

tAME tertiary-amyl methyl ether Complete analytical results and chain of custody documentation are included in Appendix C.

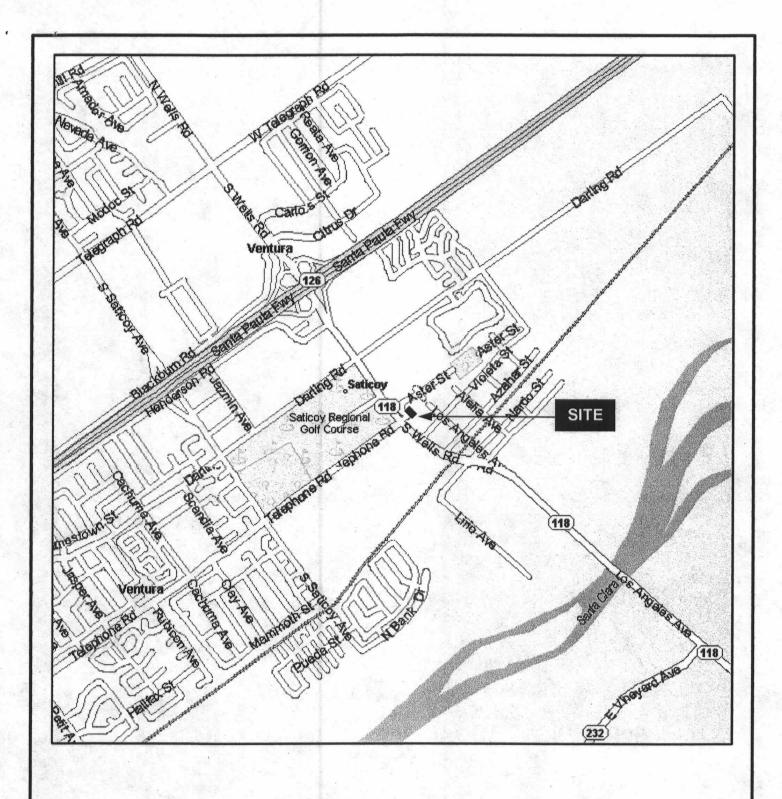
not detected at or above the MDLs used Ethyl tertiary-butyl ether Dissolved lead Di-isopropyl ether Diss. Lead nd

DIPE Eabe

MDLs are not listed for this constituent not analyzed

급 28 2

Contaminant concentration increased from last quarterly monitoring event Contaminant concentration decreased from last quarterly monitoring event not calculated due to insufficient data



SCALE: 1" = 2300'
1380 2300 4600 ft

Oft.



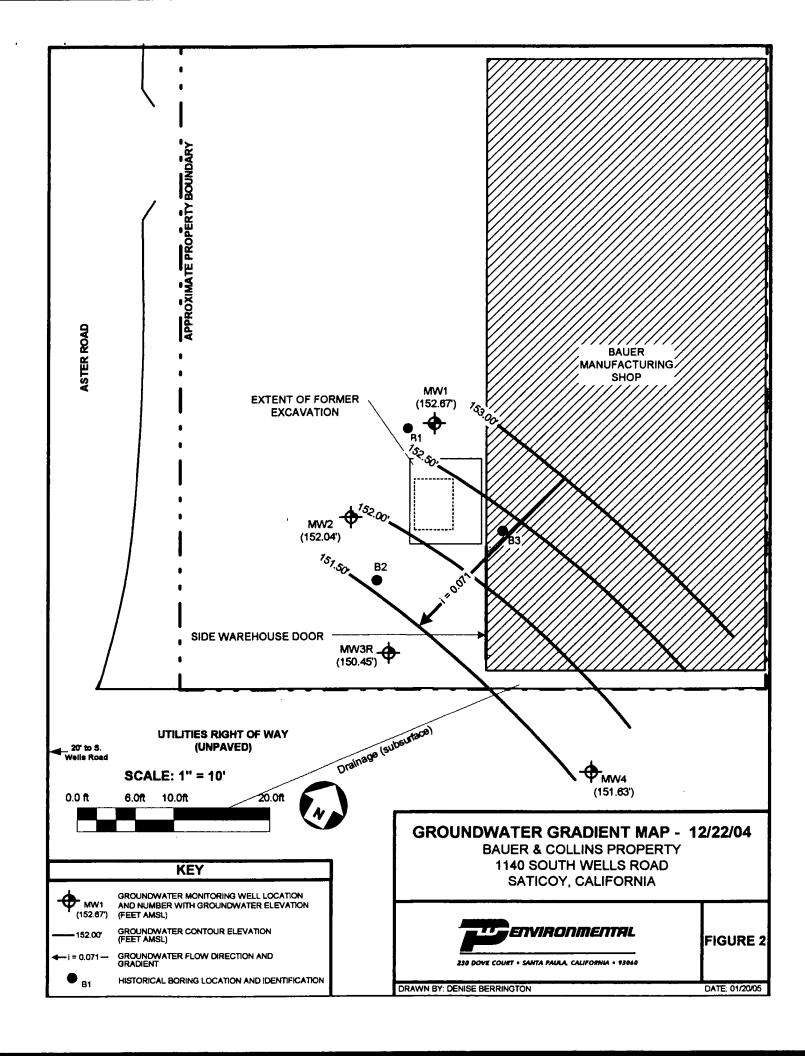
### SITE LOCATION MAP

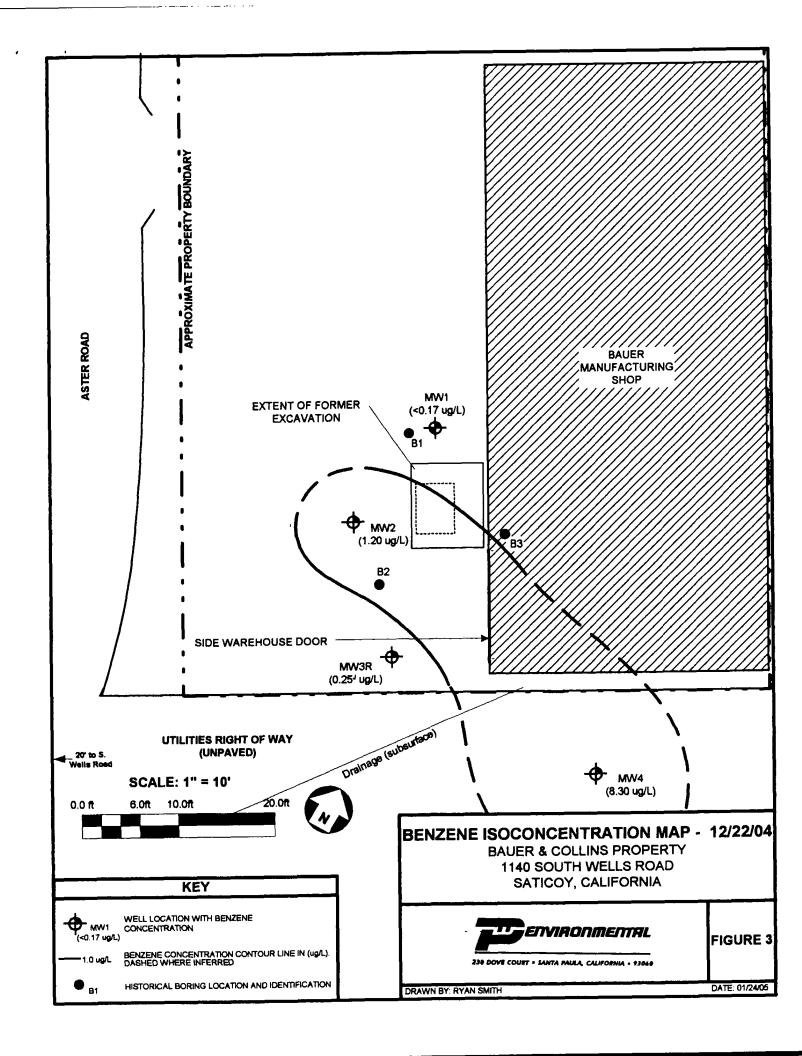
BAUER & COLLINS PROPERTY 1140 SOUTH WELLS ROAD SATICOY, CALIFORNIA



FIGURE 1

230 DOVE COURT . SANTA PAULA, CALIFORNIA . 93060







### APPENDIX A

### SITE DESCRIPTION, BACKGROUND, AND GROUNDWATER SAMPLING PROTOCOL



### SITE DESCRIPTION

The Bauer and Collins site is located at 1140 South Wells Road, east of the intersection of Aster Road and South Wells Road in Saticoy (Figure 1). The rectangular site is located in an area of mixed residential/commercial use and is bound by: residences to the north and east; an unpaved easement road and storm drainage channel to the south; and Aster Road to the west. The eastern two-thirds of the property is occupied by a single-story building that formerly operated as a commercial/retail awning construction and repair business. The western third of the property contains a paved area used for parking (Figure 2). The site is generally flat with a gentle surface gradient to the southwest.

### SITE BACKGROUND

On October 11, 2001, PW Environmental (PW) removed one 550-gallon gasoline underground storage tank (UST; located adjacent to the west side of the building, near the southernmost building entrance) and associated plumbing from the site. During excavation activities, strong hydrocarbon odors and staining were observed in soil below and adjacent to the base of the UST. Laboratory analytical results for soil samples collected from the UST excavation indicated the presence of elevated concentrations of total petroleum hydrocarbons as gasoline (TPH-G) up to 1,800 milligrams per Kilogram (mg/kg) at 5 feet below ground surface (bgs) and total lead ranging from 16 to 20 mg/kg.

Based on site information and observed site conditions, the County of Ventura Environmental Health Division, Leaking Underground Fuel Tank Program (EHD) issued a letter dated January 30, 2002, requiring a preliminary site assessment be conducted to determine the extent of hydrocarbon contamination in the vicinity of the former UST. In response, PW prepared a Soil and Groundwater Assessment Workplan dated February 12, 2002. EHD approved this workplan in a letter dated March 8, 2002.

On May 1, 2002, three Geoprobe<sup>®</sup> soil borings (B1, B2 and B3) were advanced. PW was on site to collect and document soil and groundwater samples from each of the borings. At 5 feet bgs in the boring adjacent to the UST excavation, TPH-G was detected at 540 mg/kg and total lead ranged from non detect to 17 mg/kg. The results of this phase of investigation were presented in PW's Soil and Groundwater Assessment Report, dated June 27, 2002.

Based on the information presented in the June 27, 2002 report, EHD issued a letter, dated July 26, 2002, requiring the submittal of a workplan to verify the contamination identified at the site during the initial investigation, and preparation and submittal of a site-specific, Site Conceptual Model (SCM). PW submitted an *Additional Soil and Groundwater Assessment Workplan*, dated August 8, 2002. The workplan was conditionally approved by EHD in a letter dated October 4, 2002.

On January 21, 2003, four hollow stem auger soil borings were advanced in the vicinity of the former UST. The borings were completed as 2-inch diameter groundwater monitoring wells (MW1, MW2, MW3, and MW4). Laboratory analytical results reported for the soil samples



collected during well installation activities indicate that concentrations of TPH-G, ethylbenzene, and total xylenes exceeding minimum detection limits are present in site soil. Laboratory analytical results for the groundwater samples indicate the presence of dissolved lead, 1,2dichloroethane (EDC), and TPH-G in the groundwater. The contaminant concentrations reported for the samples did not exceed State water standards action levels, or maximum contaminant levels, with the exception of EDC detected in the well down gradient of the former UST at a concentration of 5.3 micrograms per liter (µg/L). Based on the information generated during the additional soil and groundwater assessment and SCM, it appeared that minor soil and groundwater contamination existed beneath the site. Because the soil and groundwater contaminant plume had not been fully assessed in the lateral and vertical dimensions and active irrigation wells are located down gradient of the site, PW recommended drilling Geoprobe borings to further delineate the lateral extent of soil contamination, conduct site remediation by source removal, and continue quarterly groundwater monitoring. The work performed and findings were presented in PW's Additional Soil and Groundwater Assessment Report, dated March 10, 2003, and Site Conceptual Model, dated April 24, 2003. In response, EHD issued letters dated March 25 and June 20, 2003, accepting the results of the soil and groundwater assessment and SCM conducted, and required continued quarterly monitoring for the site. The letters also stated that data collected from consecutive quarterly monitoring events would support the consideration for low-risk closure.

Based on four quarters of groundwater monitoring data, EHD issued a letter dated January 8, 2004, notifying the RP that the site was to be evaluated for low-risk closure eligibility. The letter further stated that until concurrence from the Regional Water Quality Control Board is received, the quarterly groundwater monitoring program is to continue at the site. In a subsequent letter dated March 30, 2004, EHD directed that corrective action be performed in the source area to remove the residual hydrocarbon mass in the soil to be further protective of groundwater and of the nearby public supply wells located down-gradient of the source area. Until completion of the corrective action, EHD directed that the existing quarterly monitoring program continue at the site. In response, PW prepared Corrective Action Plan (CAP), dated May 24, 2004. The proposed workscope consist of: 1) conducting a limited hand auger assessment in areas adjacent to MW3 and in the former UST excavation pit to evaluate the required extent of the excavations to remove source soil; 2) completion of the remedial excavation using slot-cut method pending results from laboratory analytical results from the hand auger assessment; and, 3) collection of verification soil samples and submittal to a State-certified analytical laboratory for testing.

In a letter dated June 21, 2004, EHD approved the proposed workscope with these conditions: 1) eliminate hand auger borings and associated soil sampling; 2) extend excavation depths to nine feet below ground surface; 3) abandon well MW3 and excavate impacted soil surrounding the well; 4) following excavation activities, replace monitoring well MW3 in the immediate area for future groundwater monitoring; 5) modification to the dewatering plan to include direct dewatering if appropriate; 6) modified soil sampling plan for excavation areas; and, 7) perform two additional quarters of groundwater monitoring and sampling following completion of excavation activities. On August 26, 2004, PW abandoned groundwater monitoring well MW3. On September 10, 2004, PW initiated excavation activities in the vicinity of former monitoring well MW3. Based on field observations, additional soil removal was warranted. PW provided



the preliminary findings to EHD in Remedial Excavation Preliminary Findings report, dated September 23, 2004, and proposed extending the excavation. EHD approved the modified workscope except for extending the excavation to the east as proposed. From October 7 through 26, 2004, PW implemented the modified workscope and provided EHD with preliminary findings in a correspondence dated October 29, 2004. Based on the findings, PW recommended that residual soil, with elevated TPH-G concentrations (2,200 mg/kg) be removed. EHD approved additional soil removal in their correspondence dated November 3, 2004. PW initiated the modified workscope on November 16, 2004. Laboratory analytical results indicated TPH-G concentrations up to 1,200 mg/kg from the southern and eastern walls of the excavation at 6 feet bgs. Preliminary findings of the fieldwork were submitted to EHD in a facsimile on November 24, 2004, and discussed during a telephone conversation on November 29, 2004. PW prepared Additional Remedial Excavation Work letter report, dated November 30, 2004, proposing to excavate additional soil. In a facsimile and letter dated December 1 and 3, 2004, respectively, EHD approved the modified workscope.

On December 3, 2004, following completion of excavation activities outside the structure, PW proceeded with the installation of one groundwater monitoring well in the location of former well MW3 (MW3R). During the period of December 6 through 9, 2004, PW proceeded to complete the modified workscope approved by EHD. Confirmation soil samples collected on December 6, 2004, indicated non-detectable or concentrations of TPH-G below EHD cleanup levels established for the site (300 mg/kg). PW provided the preliminary findings to EHD in a facsimile dated December 7, 2004, indicating that the extent of the excavation had been completed. Between December 7 and 9, 2004, PW completed backfill activities and resurfaced the inside the structure with concrete. PW's findings were presented in the *Remedial Excavation Report*, dated January 25, 2005.



### GROUNDWATER SAMPLING PROTOCOL

Quarterly monitoring activity at the Bauer and Collins Property includes monitoring and sampling four site wells (MW1 through MW4). The following procedure details the routine purging and sampling of groundwater monitoring wells. These activities are based on the *California Water Well Standards*, Local Oversight Agency (LOP) regulations and directives, and experience.

- 1. All pump/bailer components are steam-cleaned, or washed in ALCONOX® cleaner, or equivalent, before and between development and purging of separate wells.
- 2. Appropriate purge volumes are calculated through the following steps:
  - a. Measure depth to groundwater (static groundwater level) using a clean, electronic water-level indicator, interface probe, or equivalent, to the marked datum point on the top of the well casing, recorded to 0.01-foot.
  - b. Measure all site-related wells prior to purging any of the site wells. If groundwater conditions are known, measure wells from the least to the most impacted. If product is evident, DO NOT PURGE OR SAMPLE THE WELL.
  - c. If liquid-phase hydrocarbon (free-floating product) is suspected or known, use a product/water interface probe for measurement.
  - d. After measuring the depth to water, lower the electronic water-level meter, or a clean tape and plumb bob, to measure and confirm the well depth and sediment that may have settled in the well, if necessary.
  - e. Calculate one casing volume using total water depth in well for purging  $(\pi r^2 h \times 7.4805 \text{ gallon/ft}^3$  with values in feet, where r is the radius of the well and h is the net feet of water in the well); for initial well development, include annular (well volume) space for volume calculation:

$$[\{(\pi b^2 h - \pi r^2 h) \times \rho\} + \pi r^2 h] \times 7.4805 \text{ gallon/ft}^3$$

where **b** is the borehole radius, and  $\rho$  is the assumed porosity of the filter pack (~35%).

- 3. Prior to sampling, three well volumes (the usual minimum) are purged from each well to ensure that water sampled is representative of the groundwater from the formation. If the well does not "clean up" (NTU acceptable value) to a satisfactory level of 5% or less of suspended material (by Imoff Cone, or NTU value), a surge block should be used to assist with purging. If the well has not be sampled or developed for over one year, the well should be surged and re-developed, as described in paragraph 2e.
- 4. Measurements of pH, temperature, (turbidity in NTUs, as necessary) and conductivity/hardness must be recorded at frequent intervals during the purge; when these



- parameters stabilize, purging should be complete. Measure values with a Horiba<sup>®</sup> U10, standard Hydac<sup>®</sup> CTpH Tester, or equivalent meter.
- 5. If a well is pumped dry, a representative sample can be colleted: 1) once the water level recovers to 80 percent of the initial water column measured in the well, or 2) after 2 hours, whichever occurs first. Surging the well may be necessary to stimulate flow in fine-grained soils.
- 6. Development/purge water is stored in **labeled** D.O.T. 55-gallon drums, or other appropriate container, and retained on site until the proper disposal method is approved. Non-detect purged waters may remain on site to evaporate, used for landscape irrigation, dust control, or other uses as approved by LOP.
- 7. Use a pre-cleaned disposable bailer, dedicated bailer, or a cleaned, re-usable Teflon® bailer, for sampling. With the depth to water measured, the bailer is lowered slowly into the well so that only one-half of the bailer enters the groundwater. This allows for inspection/ observation of the groundwater surface upon retrieval.
- 8. Groundwater samples are immediately transferred from the bailer, through a bottom-emptying valve, into 40 ml VOA sampling bottles. At least three VOA bottles are filled per well, with preservatives, as directed or required, and sealed with Teflon-septa cap. VOAs should be filled until the water develops a positive meniscus. Fill VOAs first, then the remaining plastic or amber bottles (for lead, diesel analyses).
- 9. A blind duplicate sample should be collected per every 10 samples, or as directed by the LOP; for 2 to 10 samples, collect one duplicate sample. A laboratory-supplied trip blank must accompany every sample container. VOAs must be immediately placed in a cooler chilled to approximately 4°C, for transport to the state-certified analytical laboratory. A protected travel thermometer may also be placed in the chilled cooler to verify temperature. Samples are usually delivered to the state-certified laboratory on the same day as collected or within 24-hours of sampling.
- 10. A Chain-of-Custody (COC) form that documents the time, date, analytical methods, and responsible person during each step of the transportation process accompanies samples. The COC is completed in the field.
- 11. Groundwater-sample containers are clearly labeled to show: a unique project identifier; well number; sample sequence (if applicable); time and date sampled; added preservative; analytical methods (if space allows); and sampler's initials. An indelible non-water soluble marking pen is used to label all containers.
- 12. Should problems develop regarding this protocol, field operations, or sampling conditions, the Project Manager is immediately notified.



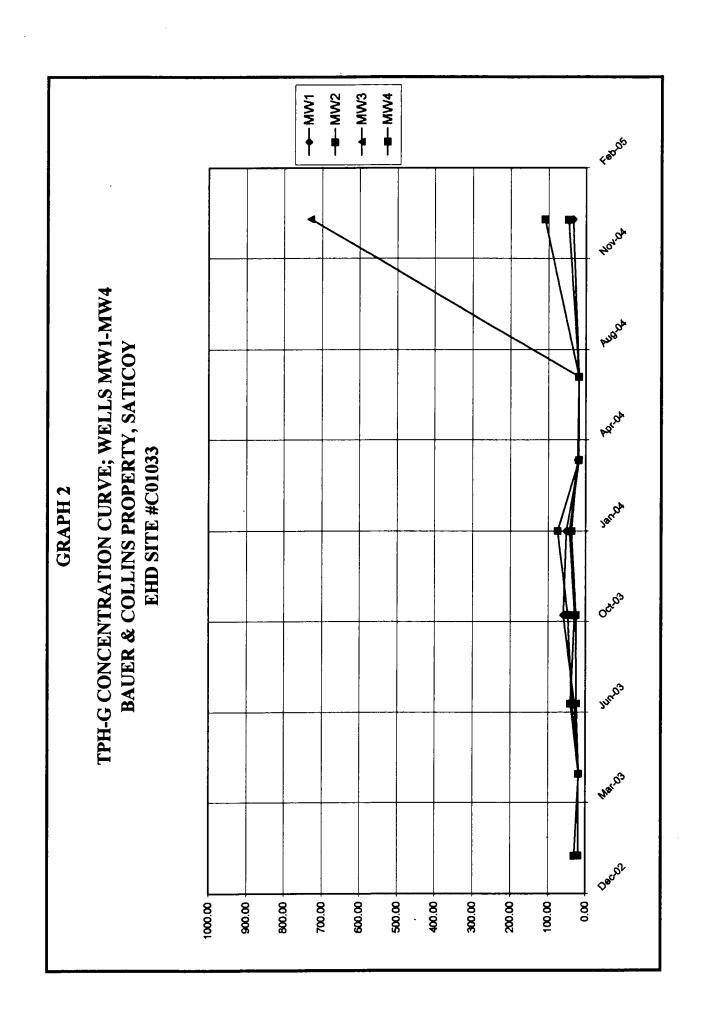
- 13. Specifically, the groundwater samples collected from the site wells are analyzed for:
  - a. Total petroleum hydrocarbons as gasoline (TPH-G) and as diesel (TPH-D) using EPA Method 8015M
  - b. Benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary-butyl ether (MtBE), tertiary-butyl alcohol (tBA), tertiary-amyl methyl ether (tAME), diisopropyl ether (DIPE), and ethyl tertiary-butyl ether (EtBE) by EPA Method 8260B.
  - c. Dissolved lead by EPA Method 6020.
  - d. The duplicate groundwater sample and trip blank was submitted and analyzed for BTEX, MtBE, tBA, tAME, DIPE and EtBE by EPA Method 8260B.



### APPENDIX B

**DATA GRAPHS** 

**-**►MW3 \*-MW4 HISTORICAL GROUNDWATER ELEVATIONS; WELLS MW1 - MW4 BAUER & COLLINS PROPERTY, SATICOY ATT.OA **EHD SITE** #C01033 **GRAPH 1** Octas 165.00 163.00 161.00 159.00 157.00 155.00 151.00 149.00 147.00 145.00 153.00



**--** MW2 **★**-MW3 \*- MW4 **→** MW1 HOYOK BENZENE CONCENTRATION CURVE; WELLS MW1-MW4 BAUER & COLLINS PROPERTY, SATICOY EHD SITE #C01033 **GRAPH 3** Octob 800 9.00 8.00 7.00 6.00 5.00 8. 3.00 2.00 8. 10.00



### **APPENDIX C**

### MONITORING WELL FIELD DATA

### LABORATORY ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

# MONITORING WELL FIELD DATA SHEET

Bauer & Collins Property - 04QM04

VCEHD EHD Number: 1033

Date Measured and Purged:		12/22/04			Date Sampled: 12/22/04	12/22/04		
Well Number	MW1	MW2	MW3R	MW4				
Time Measured	_	_	1	1				
Well Casing Elevation (feet 0.01)	159.16	158.96	158.87	159.48				
Depth to Water (feet 0.01)	6.49	6.92	8.42	7.85				
Water Elevation (feet 0.01)	162.67	162.04	150.46	151.63				
Depth of Well (feet 0.01)	18.00	20.00	18.00	18.00				
Feet of Water in Well (feet 0.01)	11.61	13.08	9.68	10.15				
Well Diameter (inches; default 4")	2	2	2	2				
Calculated One BoringVolume (gal.)	2.07	2.35	1.72	1.83				
Three Well Volumes (gal.)	9	7	8	9				
Depth to Water after Purge	8.12	9.70	10.30	8.51				
pH (before/after)	7.48/7.03	6.97/6.91	7.27/7.33	1.787.01				
Electric Conductivity (E.C.; mmhos/cm@	1.11/4.09	3.75/4.37	4.39/2.77	1.03/3.42				
Temperature (°C) (before/after)	15.9/20.3	18.2/21.1	21.8/21.0	16.3/17.9				
Turbidity (NTU; before/after)	83/654	635/477	652/259	287/999				
Free-Floating Product (ffp). Thickness (0.00 ff), Sheen, Odor, etc.	HONE	NONE	<b>JNON</b>	NOME				
Approximate Volume Purged (gal.)	6.0	7.0	0.9	0.9				
Sampled and Analyzed? (yes/no)	YES	YES	YES	YES				
Time of Sampling (same as COC)	11:21	12:02	12:09	11:38				
Total Produced Water (gal.):	25.0	Duplicate	Duplicate Sample from: MW3R	MW3R				
NOTES: (Include wellhead condition, additional well, data collection information)	nal well, data	collection in	formation)					
		:						
Samples received and analyzed by:	Columbia	Analytic	Columbia Analytical Services		nc = not calculated			
						Dispose	Dispose of water by:	03/22/06



January 12, 2005

Robert Orlando PW Environmental 230 Dove Court Santa Paula, CA 93060

RE: Bauer MFG/4QM04

Dear Bob:

Enclosed are the results of the samples submitted to our laboratory on December 23, 2004. For your reference, these analyses have been assigned our service request number L0402589.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Your report contains 29 pages.

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 1296A); NELAP (certificate number: 02115CA); Los Angeles County Laboratory ID (No. 10151); and Arizona Department of Health Services (License number: AZ0136 and AZ0544).

If you have any questions, please call me at (818) 587-5550, extension 310.

Respectfully submitted,

Columbia Analytical Services, Inc.

Project Chemist

SS/EAB

### Columbia Analytical Services, Inc.

### Acronyms

8015M California DHS LUFT Method **ASTM** American Society for Testing and Materials BOD Biochemical Oxygen Demand **BTEX** Benzene/Toluene/Ethylbenzene/Xylenes CAM California Assessment Metals CAS Number

Chemical Abstract Service Registry Number CFC Chlorofluorocarbon COD Chemical Oxygen Demand CRDL Contract Required Detection Limit

D Detected; result must be greater than zero.

DL Detected; result must be greater than the detection limit.

DLCS **Duplicate Laboratory Control Sample** 

**DMS** Duplicate Matrix Spike DOH or DHS Department of Health Services

Environmental Laboratory Accreditation Program **ELAP** 

**EPA** U.S. Environmental Protection Agency

GC Gas Chromatography

GC/MS Gas Chromatography/Mass Spectrometry

IC Ion Chromatography

ICB Initial Calibration Blank sample

Inductively Coupled Plasma atomic emission spectrometry **ICP** 

**ICV** Initial Calibration Verification sample

**LCS** Laboratory Control Sample Leaking Underground Fuel Tank LUFT

Modified M

**MBAS** Methylene Blue Active Substances

MDL Method Detection Limit MRL Method Reporting Limit

MS Matrix Spike

**MTBE** Methyl-tert-Butyl Ether

Not Applicable NA Not Calculated NC

ND None Detected at or above the Method Reporting/Detection Limit (MRL/MDL)

Nephelometric Turbidity Units NTU

Parts Per Billion ppb Parts Per Million ppm

**PQL Practical Quantitation Limit** QA/QC Quality Assurance/Quality Control **RCRA** Resource Conservation and Recovery Act

**RPD** Relative Percent Difference SIM Selected Ion Monitoring

SM Standard Methods for the Examination of Water and Wastewater 18th Ed., 1992.

**STLC** Solubility Threshold Limit Concentration

Test Methods for Evaluating Solid Waste, Physical/Chemical MethodsSW-846, SW

Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB.

TCLP Toxicity Characteristics Leaching Procedure

Total Dissolved Solids TDS

TPH Total Petroleum Hydrocarbons

Total Recoverable Petroleum Hydrocarbons TRPH

TSS Total Suspended Solids

TTLC **Total Threshold Limit Concentration** 

See case narrative.

VOA Volatile Organic Analyte(s)

### Qualifiers

U Undetected at or above MDL/MRL (PQL). Estimated concentration. Analyte detected above MDL but below MRL (PQL). J

В Hit above MRL (PQL) also found in Method Blank. Analyte concentration above high point of ICAL.

E D Result from dilution. X

Client:

PW Environmental

Project:

Bauer MFG/4QM04

Date Received:

Service Request No.: L0402589 12/23/04

Sample Matrix:

Water

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory Control Sample (LCS).

### Sample Receipt

Water samples were received for analysis at Columbia Analytical Services on 12/23/04. No discrepancies were noted upon initial sample inspection. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored at 4°C upon receipt at the laboratory.

### Volatile Organic Compounds by EPA Method 8260B

No anomalies were encountered.

### Gasoline Range Organics by EPA Method 8015B

Sample MW3 required dilution due to the presence of elevated levels of target analyte. The reporting limits are adjusted to reflect the dilution.

### Diesel Range Organics by EPA Method 8015M

No anomalies were encountered.

Approved by	55	Date	1/12/05
	3		<del></del>

Client: Project:

PW Environmental Bauer MFG/4QM04 Service Request:

L0402589

### Cover Page - Organic Analysis Data Package **Volatile Organic Compounds**

Sample Name	Lab Code	Date Collected	Date Received
-	L0402589-001	12/22/2004	12/23/2004
MW1 MW2	L0402589-001 L0402589-002	12/22/2004	12/23/2004
MW3	L0402589-002	12/22/2004	12/23/2004
MW4	L0402589-004	12/22/2004	12/23/2004
DUP	L0402589-005	12/22/2004	12/23/2004
QCTB	L0402589-006	12/22/2004	12/23/2004
MW2MS	LWG0404778-1	12/22/2004	12/23/2004
MW2DMS	LWG0404778-2	12/22/2004	12/23/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Name: Sheet Sigman

Title: Project Chemist

Cover Page - Organic

Page 1 of

**Analytical Results** 

Client:

PW Environmental Bauer MFG/4QM04

Project: Sample Matrix:

Water

Service Request: L0402589

**Date Collected:** 12/22/2004 **Date Received:** 12/23/2004

### **Volatile Organic Compounds**

Sample Name:

MW1

Lab Code:

L0402589-001

**Extraction Method:** 

EPA 5030B

Analysis Method:

8260B

Units: ug/L Basis: NA

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	0.50	0.17	1	12/28/04	12/28/04	LWG0404778	
Toluene	0.62	0.50	0.22	1	12/28/04	12/28/04	LWG0404778	
Ethylbenzene	ND U	0.50	0.16	1	12/28/04	12/28/04	LWG0404778	
Total Xylenes	0.99 J	1.5	0.54	<u>-</u>	12/28/04	12/28/04	LWG0404778	
Methyl tert-Butyl Ether	ND U	2.0	0.32	1	12/28/04	12/28/04	LWG0404778	
tert-Butyl Alcohol	ND U	20	11	1	12/28/04	12/28/04	LWG0404778	
Diisopropyl Ether	ND U	2.0	0.27	i	12/28/04	12/28/04	LWG0404778	
tert-Butyl Ethyl Ether	ND U	2.0	0.29	1	12/28/04	12/28/04	LWG0404778	
tert-Amyl Methyl Ether	ND U	2.0	0.27	1	12/28/04	12/28/04	LWG0404778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	75-120	12/28/04	Acceptable
Toluene-d8	109	65-129	12/28/04	Acceptable
4-Bromofluorobenzene	98	65-119	12/28/04	Acceptable

Comments:

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Merged

Form 1A - Organic

Page 1 of 1
SuperSet Reference: RR8415

Analytical Results

Client: Project: PW Environmental Bauer MFG/4QM04

Sample Matrix:

Water

Service Request: L0402589

Date Collected: 12/22/2004

Date Received: 12/23/2004

### **Volatile Organic Compounds**

Sample Name:

MW2

Lab Code:

L0402589-002

**Extraction Method:** 

EPA 5030B

Analysis Method:

8260B

Units: ug/L Basis: NA

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	1.2	0.50	0.17	1	12/28/04	12/28/04	LWG0404778	
Toluene	5.2	0.50	0.22	1	12/28/04	12/28/04	LWG0404778	
Ethylbenzene	0.77	0.50	0.16	· 1	12/28/04	12/28/04	LWG0404778	
Total Xylenes	7.0	1.5	0.54	i	12/28/04	12/28/04	LWG0404778	
Methyl tert-Butyl Ether	ND U	2.0	0.32	1	12/28/04	12/28/04	LWG0404778	
tert-Butyl Alcohol	ND U	20	11	1	12/28/04	12/28/04	LWG0404778	
Diisopropyl Ether	ND U	2.0	0.27	1	12/28/04	12/28/04	LWG0404778	
tert-Butyl Ethyl Ether	ND U	2.0	0.29	1	12/28/04	12/28/04	LWG0404778	
tert-Amyl Methyl Ether	ND U	2.0	0.27	_ 1	12/28/04	12/28/04	LWG0404778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	103	75-120	12/28/04	Acceptable
Toluene-d8	106	65-129	12/28/04	Acceptable
4-Bromofluorobenzene	96	65-119	12/28/04	Acceptable

Comments:

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6 Form 1A - Organic

Page 1 of 1

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**Analytical Results** 

Client: Project: PW Environmental Bauer MFG/4QM04

Sample Matrix:

Water

Service Request: L0402589

Date Collected: 12/22/2004

Date Received: 12/23/2004

### **Volatile Organic Compounds**

Sample Name:

MW3

Lab Code:

L0402589-003

**Extraction Method:** 

EPA 5030B

Analysis Method:

8260B

Units: ug/L

Basis: NA

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	0.25 J	0.50	0.17	1	12/28/04	12/28/04	LWG0404778	
Toluene	0.38 J	0.50	0.22	1	12/28/04	12/28/04	LWG0404778	
Ethylbenzene	<b>0.26</b> J	0.50	0.16	1	12/28/04	12/28/04	LWG0404778	
Total Xylenes	0.73 J	1.5	0.54	1	12/28/04	12/28/04	LWG0404778	—
Methyl tert-Butyl Ether	ND U	2.0	0.32	1	12/28/04	12/28/04	LWG0404778	
tert-Butyl Alcohol	50	20	11	1	12/28/04	12/28/04	LWG0404778	
Diisopropyl Ether	ND U	2.0	0.27	1	12/28/04	12/28/04	LWG0404778	
tert-Butyl Ethyl Ether	ND U	2.0	0.29	1	12/28/04	12/28/04	LWG0404778	
tert-Amyl Methyl Ether	ND U	2.0	0.27	1	12/28/04	12/28/04	LWG0404778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note .
Dibromofluoromethane	102	75-120	12/28/04	Acceptable
Toluene-d8	112	65-129	12/28/04	Acceptable
4-Bromofluorobenzene	100	65-119	12/28/04	Acceptable

Comments:

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Page 1 of 1

Analytical Results

Client:

PW Environmental Bauer MFG/4QM04

Project: Sample Matrix:

Water

Service Request: L0402589

**Date Collected:** 12/22/2004 Date Received: 12/23/2004

### Volatile Organic Compounds

Sample Name:

MW4

Lab Code:

L0402589-004

**Extraction Method:** 

EPA 5030B

Analysis Method:

8260B

Units: ug/L Basis: NA

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	8.3	0.50	0.17	1	12/28/04	12/28/04	LWG0404778	· · · · · · · · · · · · · · · · · · ·
Toluene	28	0.50	0.22	1	12/28/04	12/28/04	LWG0404778	
Ethylbenzene	3.2	0.50	0.16	1	12/28/04	12/28/04	LWG0404778	
Total Xylenes	25	1.5	0.54	1	12/28/04	12/28/04	LWG0404778	
Methyl tert-Butyl Ether	ND U	2.0	0.32	1	12/28/04	12/28/04	LWG0404778	
tert-Butyl Alcohol	ND U	20	11	1	12/28/04	12/28/04	LWG0404778	
Diisopropyl Ether	ND U	2.0	0.27	1	12/28/04	12/28/04	LWG0404778	— ·
tert-Butyl Ethyl Ether	ND U	2.0	0.29	1	12/28/04	12/28/04	LWG0404778	
tert-Amyl Methyl Ether	ND U	2.0	0.27	1	12/28/04	12/28/04	LWG0404778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	102	75-120	12/28/04	Acceptable
Toluene-d8	107	65-129	12/28/04	Acceptable
4-Bromofluorobenzene	96	65-119	12/28/04	Acceptable

Comments:

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Page 1 of 1

**Analytical Results** 

Client: Project: PW Environmental Bauer MFG/4QM04

Sample Matrix:

Water

Service Request: L0402589

Date Collected: 12/22/2004 **Date Received:** 12/23/2004

### Volatile Organic Compounds

Sample Name:

DUP

Lab Code:

L0402589-005

Extraction Method: EPA 5030B

Analysis Method:

8260B

Units: ug/L Basis: NA

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	0.26 J	0.50	0.17	1	12/28/04	12/28/04	LWG0404778	
Toluene	0.53	0.50	0.22	1	12/28/04	12/28/04	LWG0404778	
Ethylbenzene	0.31 J	0.50	0.16	1	12/28/04	12/28/04	LWG0404778	
Total Xylenes	0.98 J	1.5	0.54	1	12/28/04	12/28/04	LWG0404778	
Methyl tert-Butyl Ether	ND U	2.0	0.32	1	12/28/04	12/28/04	LWG0404778	
tert-Butyl Alcohol	53	20	11	1	12/28/04	12/28/04	LWG0404778	
Diisopropyl Ether	ND U	2.0	0.27	i	12/28/04	12/28/04	LWG0404778	
tert-Butyl Ethyl Ether	ND U	2.0	0.29	1	12/28/04	12/28/04	LWG0404778	
tert-Amyl Methyl Ether	ND U	2.0	0.27	1	12/28/04	12/28/04	LWG0404778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	75-120	12/28/04	Acceptable
Toluene-d8	104	65-129	12/28/04	Acceptable
4-Bromofluorobenzene	90	65-119	12/28/04	Acceptable

Comments:

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Page 1 of 1

**Analytical Results** 

Client: Project: PW Environmental Bauer MFG/4QM04

Sample Matrix:

Water

•

Service Request: L0402589

Date Collected: 12/22/2004

**Date Received:** 12/23/2004

### **Volatile Organic Compounds**

Sample Name:

**QCTB** 

Lab Code:

L0402589-006

Extraction Method:

EPA 5030B

Analysis Method:

8260B

Units: ug/L Basis: NA

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	0.50	0.17	1	12/28/04	12/28/04	LWG0404778	
Toluene	ND U	0.50	0.22	1	12/28/04	12/28/04	LWG0404778	
Ethylbenzene	ND U	0.50	0.16	1	12/28/04	12/28/04	LWG0404778	
Total Xylenes	ND U	1.5	0.54	1	12/28/04	12/28/04	LWG0404778	
Methyl tert-Butyl Ether	ND U	2.0	0.32	1	12/28/04	12/28/04	LWG0404778	
tert-Butyl Alcohol	ND U	20	11	1	12/28/04	12/28/04	LWG0404778	
Diisopropyl Ether	ND U	2.0	0.27	1	12/28/04	12/28/04	LWG0404778	
tert-Butyl Ethyl Ether	ND U	2.0	0.29	1	12/28/04	12/28/04	LWG0404778	
tert-Amyl Methyl Ether	ND U	2.0	0.27	1	12/28/04	12/28/04	LWG0404778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	100	75-120	12/28/04	Acceptable
Toluene-d8	105	65-129	12/28/04	Acceptable
4-Bromofluorobenzene	93	65-119	12/28/04	Acceptable

Comments:

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**Analytical Results** 

Client:

PW Environmental Bauer MFG/4QM04

Project: Sample Matrix:

Water

Service Request: L0402589

Date Collected: NA Date Received: NA

### Volatile Organic Compounds

Sample Name: Lab Code:

Method Blank LWG0404778-4

Extraction Method:

EPA 5030B

Units: ug/L Basis: NA

Level: Low

Analysis Method: 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	0.50	0.17	1	12/28/04	12/28/04	LWG0404778	
Toluene	ND U	0.50	0.22	1	12/28/04	12/28/04	LWG0404778	
Ethylbenzene	ND U	0.50	0.16	1	12/28/04	12/28/04	LWG0404778	
Total Xylenes	ND U	1.5	0.54	1	12/28/04	12/28/04	LWG0404778	
Methyl tert-Butyl Ether	ND U	2.0	0.32	1	12/28/04	12/28/04	LWG0404778	
tert-Butyl Alcohol	ND U	20	11	1	12/28/04	12/28/04	LWG0404778	
Diisopropyl Ether	ND U	2.0	0.27	1	12/28/04	12/28/04	LWG0404778	<del></del>
tert-Butyl Ethyl Ether	ND U	2.0	0.29	1	12/28/04	12/28/04	LWG0404778	
tert-Amyl Methyl Ether	ND U	2.0	0.27	1	12/28/04	12/28/04	LWG0404778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	101	75-120	12/28/04	Acceptable	
Toluene-d8	106	65-129	12/28/04	Acceptable	
4-Bromofluorobenzene	98	65-119	12/28/04	Acceptable	

Comments:

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11 Form 1A - Organic

SuperSet Reference: RR8415

QA/QC Report

Client:

PW Environmental Bauer MFG/4QM04

Project:

Service Request: L0402589

Sample Matrix:

Water

Surrogate Recovery Summary Volatile Organic Compounds

Extraction Method: Analysis Method:

EPA 5030B

8260B

Units: PERCENT

Level: Low

Sample Name	Lab Code	<u>Sur1</u>	Sur2	Sur3
MW1	L0402589-001	104	109	98
MW2	L0402589-002	103	106	96
MW3	L0402589-003	102	112	100
MW4	L0402589-004	102	107	96
DUP	L0402589-005	94	104	90
QCTB	L0402589-006	100	105	93
Method Blank	LWG0404778-4	101	106	98
MW2MS	LWG0404778-1	99	107	96
MW2DMS	LWG0404778-2	94	100	92
Lab Control Sample	LWG0404778-3	103	110	101

Surrogate Recovery Control Limits (%)

Surl =	Dibromofluoromethane	75-120
Sur2 =	Toluene-d8	65-129
Sur3 =	4-Bromofluorobenzene	65-119

Results flagged with an asterisk (\*) indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:

PW Environmental Bauer MFG/4QM04

Project: Sample Matrix:

Water

Service Request: L0402589

Date Extracted: 12/28/2004

Date Analyzed: 12/28/2004

# Matrix Spike/Duplicate Matrix Spike Summary Volatile Organic Compounds

Sample Name:

MW2

Lab Code:

L0402589-002

Extraction Method: Analysis Method:

EPA 50. 8260B

EPA 5030B

Units: ug/L Basis: NA

)4515; IVA

Level: Low

Extraction Lot: LWG0404778

MW2MS

MW2DMS LWG0404778-2

	Sample		VG0404778- Matrix Spike	1		vG0404778-: cate Matrix S		%Rec		RPD
Analyte Name	Result	Result	Expected	%Rec	Result	Expected	%Rec	Limits	RPD	Limit
Benzene	1.2	12.0	10.0	108	11.3	10.0	101	64-130	6	25
Toluene	5.2	15.2	10.0	100	14.3	10.0	91	72-129	6	25
Ethylbenzene	0.77	10.7	10.0	99	10.2	10.0	95	67-136	4	25
Methyl tert-Butyl Ether	ND	21.2	20.0	106	21.0	20.0	105	53-134	1	25

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Form 3A - Organic

SuperSet Reference: RR8415

Page 1 of 1

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QA/QC Report

Client: Project: PW Environmental Bauer MFG/4QM04

Sample Matrix:

Water

Service Request: L0402589 Date Extracted: 12/28/2004

**Date Analyzed:** 12/28/2004

Lab Control Spike Summary Volatile Organic Compounds

Extraction Method:

EPA 5030B

Analysis Method:

8260B

Units: ug/L

Basis: NA

Level: Low

Extraction Lot: LWG0404778

Lab Control Sample LWG0404778-3 Lab Control Spike

% Rec				
Result	Expected	%Rec	Limits	
11.0	10.0	110	76-119	
10.7	10.0	107	79-121	
10.2	10.0	102	78-122	
30.5	30.0	102	78-123	
21.6	20.0	108	63-131	
221	200	110	68-153	
21.3	20.0	107	71-133	
20.8	20.0	104	73-125	
21.6	20.0	108	72-126	
	Result  11.0 10.7 10.2 30.5 21.6 221 21.3 20.8	Result         Expected           11.0         10.0           10.7         10.0           10.2         10.0           30.5         30.0           21.6         20.0           221         200           21.3         20.0           20.8         20.0	Result         Expected         %Rec           11.0         10.0         110           10.7         10.0         107           10.2         10.0         102           30.5         30.0         102           21.6         20.0         108           221         200         110           21.3         20.0         107           20.8         20.0         104	Result         Expected         %Rec         Limits           11.0         10.0         110         76-119           10.7         10.0         107         79-121           10.2         10.0         102         78-122           30.5         30.0         102         78-123           21.6         20.0         108         63-131           221         200         110         68-153           21.3         20.0         107         71-133           20.8         20.0         104         73-125

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

RR8415

Client: Project: PW Environmental Bauer MFG/4QM04

Service Request:

L0402589

Cover Page - Organic Analysis Data Package Gasoline Range Organics (GRO)

Sample Name	Lab Code	Date Collected	Date Received
MW1	L0402589-001	12/22/2004	12/23/2004
MW2	L0402589-002	12/22/2004	12/23/2004
MW3	L0402589-003	12/22/2004	12/23/2004
MW4	L0402589-004	12/22/2004	12/23/2004
MWIMS	LWG0404758-1	12/22/2004	12/23/2004
MWIDMS	LWG0404758-2	12/22/2004	12/23/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Name: 5 tract Sigman

Title: Project Chemist

Cover Page - Organic

**Analytical Results** 

Client:

PW Environmental

Project: Sample Matrix: Bauer MFG/4QM04

Water

Service Request: L0402589

Date Collected: 12/22/2004 Date Received: 12/23/2004

Gasoline Range Organics (GRO)

Sample Name:

MW1

Lab Code:

L0402589-001

Extraction Method:

EPA 5030B

Analysis Method:

8015B

Units: ug/L

Basis: NA

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	ND U	50	35	1	12/27/04	12/27/04	LWG0404758	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	92	67-117	12/27/04	Acceptable	

Comments:

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Page

1 of 1

**Analytical Results** 

Client:

PW Environmental Bauer MFG/4QM04

Project: Sample Matrix:

Water

Service Request: L0402589

Date Collected: 12/22/2004

**Date Received:** 12/23/2004

Gasoline Range Organics (GRO)

Sample Name:

MW2

Lab Code:

L0402589-002

Extraction Method:

EPA 5030B

Analysis Method:

8015B

Units: ug/L

Basis: NA

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	47 J	50	35	1	12/27/04	12/27/04	LWG0404758	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	91	67-117	12/27/04	Acceptable

Comments:

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**Analytical Results** 

Client:

PW Environmental Bauer MFG/4QM04

Project: Sample Matrix:

Water

Service Request: L0402589

**Date Collected:** 12/22/2004 Date Received: 12/23/2004

Gasoline Range Organics (GRO)

Sample Name:

MW3

Lab Code:

L0402589-003

Units: ug/L Basis: NA

Extraction Method:

EPA 5030B

Analysis Method:

8015B

Level: Low

maij	313	Mictilou.	, 00	,,,

Date

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	<b>730</b> D	250	180	5	12/27/04	12/27/04	LWG0404758	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	107	67-117	12/27/04	Acceptable	

Comments:

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Merged

18 Form 1A - Organic

Page 1 of 1 RR8437 SuperSet Reference:

**Analytical Results** 

Client: Project: PW Environmental Bauer MFG/4QM04

Sample Matrix:

Water

Service Request: L0402589

Date Collected: 12/22/2004 **Date Received:** 12/23/2004

# Gasoline Range Organics (GRO)

Sample Name:

MW4

Lab Code:

L0402589-004

Extraction Method:

EPA 5030B

Analysis Method:

8015B

Units: ug/L

Basis: NA

Level: Low

		•		Dilution	Date	Date	Extraction	
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	110	50	35	1	12/27/04	12/27/04	LWG0404758	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	92	67-117	12/27/04	Acceptable

Comments:

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Page 1 of 1

Analytical Results

Client:

PW Environmental

Project:

Bauer MFG/4QM04

Sample Matrix:

Water

Service Request: L0402589

Date Collected: NA

Date Received: NA

Gasoline Range Organics (GRO)

Sample Name:

Method Blank

Lab Code:

LWG0404758-4

**Extraction Method:** 

EPA 5030B

Analysis Method:

8015B

Units: ug/L

Basis: NA

Level: Low

Analyte Name	. Result Q	PQI	. MDI	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	ND U	50	35	1	12/27/04	12/27/04	LWG0404758	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	94	67-117	12/27/04	Acceptable	

Comments:

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Form 1A - Organic

Page 1 of 1

QA/QC Report

Client:

PW Environmental

Project:

Bauer MFG/4QM04

Sample Matrix:

Water

Service Request: L0402589

Surrogate Recovery Summary Gasoline Range Organics (GRO)

**Extraction Method:** 

EPA 5030B

Analysis Method:

8015B

Units: PERCENT

Level: Low

Lab Code	Sur1
L0402589-001	92
L0402589-002	91
L0402589-003	107
L0402589-004	92
LWG0404758-4	94
LWG0404758-1	100
LWG0404758-2	98
LWG0404758-3	100
	L0402589-001 L0402589-002 L0402589-003 L0402589-004 LWG0404758-4 LWG0404758-1 LWG0404758-2

Surrogate Recovery Control Limits (%)

Sur1 = Bromofluorobenzene

67-117

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

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Form 2A - Organic

Page 1 of 1

QA/QC Report

Client: Project: PW Environmental Bauer MFG/4QM04

Sample Matrix:

Water

Service Request: L0402589

Date Extracted: 12/27/2004

Date Analyzed: 12/27/2004

Matrix Spike/Duplicate Matrix Spike Summary Gasoline Range Organics (GRO)

Sample Name:

Analyte Name

Gasoline

MW1

Lab Code:

L0402589-001

Units: ug/L Basis: NA

Level: Low

**Extraction Method:** Analysis Method:

EPA 5030B

Extraction Lot: LWG0404758

8015B

**MW1MS** LWG0404758-1 **MWIDMS** 

LWG0404758-2

**Duplicate Matrix Spike** Matrix Spike %Rec RPD Sample **RPD** Result Limits Limit Expected %Rec Result %Rec Result Expected 841 845 ND 1000 84 1000 84 70-115 20

Results flagged with an asterlsk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Form 3A - Organic

Page

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SuperSet Reference:

RR8437

QA/QC Report

Client:

PW Environmental Bauer MFG/4QM04

Project: Sample Matrix:

Water

Service Request: L0402589

Date Extracted: 12/27/2004

**Date Analyzed:** 12/27/2004

Lab Control Spike Summary Gasoline Range Organics (GRO)

Extraction Method: EPA 5030B

Analysis Method:

8015B

Units: ug/L

Basis: NA

Level: Low

Extraction Lot: LWG0404758

Lab Control Sample LWG0404758-3

%Rec

Lab Control Spike

%Rec Result Expected

1000

Limits

**Analyte Name** Gasoline

890

89

78-116

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Page

1 of 1

SuperSet Reference: RR8437

#### Analytical Report

Client:

PW Environmental

Project:

Bauer MFG/4QM04

Service Request: L0402589

Sample Matrix:

Water

Date Collected: 12/22/04 Date Received: 12/23/04

Diesel Range Organics (DRO)

Prep Method:

**EPA 3510M** 

Units: mg/L (ppm)

Analysis Method:

8015M

Basis: NA

Test Notes:

Sample Name	Lab Code	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MWI	L0402589-001	0.50	0.41	1	12/27/04	12/27/04	ND	
MW2	L0402589-002	0.50	0.41	1	12/27/04	12/27/04	ND	
MW3	L0402589-003	0.50	0.41	1	12/27/04	12/27/04	0.47	J
MW4	L0402589-004	0.50	0.41	1	12/27/04	12/27/04	ND	
Method Blank	L041227-MB	0.50	0.41	1	12/27/04	12/27/04	ND	

DRO J

Diesel Range Organics quantified using diesel fuel.

Estimated concentration. The result is less than the PQL but greater than the MDL.

Approved By:

1A/020597p

Date: 1/12/05

# QA/QC Report

Client:

PW Environmental

Project:

Bauer MFG/4QM04

Sample Matrix:

Water

Service Request: L0402589

Date Collected: NA

Date Received: NA Date Extracted: NA Date Analyzed: NA

Surrogate Recovery Summary Diesel Range Organics (DRO)

Prep Method:

EPA 3510M

Analysis Method: 8015M

Units: PERCENT

Basis: NA

		Test	Percent Recovery
Sample Name	Lab Code	Notes	p-Terphenyl
MW1	L0402589-001		74
MW2	L0402589-002		73
MW3	L0402589-003		70
MW4	L0402589-004		77
Method Blank	L041227-MB		80
MWI	L0402589-001MS		78
MWI	L0402589-001DMS		77
Lab Control Sample	L041227-LCS		77

CAS Acceptance Limits:

68-131

Approved By: \_ SUR1/061197p

Date: 1/12/05

02589soh.mm1 - SUR1 12/30/04

DIESCLTW XLT

QA/QC Report

Client:

PW Environmental

Project:

Bauer MFG/4QM04

Sample Matrix:

Water

Service Request: L0402589

Date Collected: NA

Date Received: NA

Date Extracted: 12/27/04
Date Analyzed: 12/27/04

Matrix Spike/Duplicate Matrix Spike Summary

Diesel Range Organics (DRO)

Sample Name:

MWI

• • • • •

L0402589-001MS

L0402589-001DMS

Units: mg/L (ppm)

Basis: NA

Lab Code: Test Notes:

Percent Recovery

	Prep	Analysis		Spike	Level	Sample	Spike	Result			CAS Acceptance	Relative Percent
Analyte	Method	Method	PQL	MS	DMS	Result	MS	DMS	MS	DMS	Limits	Difference
Diesel Range Organics (DRO)	EPA 3510M	8015M	0.50	20.0	20.0	ND	21.1	20.2	106	101	57-131	4

QA/QC Report

Client:

PW Environmental

Bauer MFG/4QM04

Service Request: L0402589 Date Collected: NA

Project:

LCS Matrix:

Water

58-127

101

Date Received: NA

Date Extracted: 12/27/04

Date Analyzed: 12/27/04

Laboratory Control Sample Summary

Lab Control Sample

Diesel Range Organics (DRO)

Units: mg/L (ppm)

Lab Code:

Sample Name:

L041227-LCS

EPA 3510M

Basis: NA

Test Notes:

CAS Percent Recovery True Prep **Analysis** Percent Acceptance Result Method Value **Analyte** Method Limits Result Recovery **Notes** Diesel Range Organics (DRO) 8015M 20.0 20.2

Approved By: \_ LCS/020597p

02589soh.mm1 - LCS 12/30/04

27

DIESCLTW XLT

ENVIRONMENTAL 2040250 CHAIN OF CUSTODY RECORD (805) 656-4677 - (805) 525-5563 - FAX (805) 525-2896 [Lab. C.A.c. Aniai vcic permi recten

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wietnod of	snipment, additional comments.	LEDE-COELT  D NONE	Required MRLS	to: S.B. CO PSD-LUFT	57		· Lahontan	itan CB	Central Coast RWOCB	<u> </u>	San Bernardino County FD	dino /	KCEHD Kern County		OCHCA Orange County
A Fax prefit	A Fax preliminary data ASAP												`		,

# SAMPLE RECEIPT FORM

Service Request No: L040 2589 Client: PW ENV
Sample(s) delivered by: Client CAS Emp After Hours DHL
Golden State Overnight Fed X UPS Other Courier
Chain of Custody filled out accurately? Yes No(See Comments)
Appropriate sample volume and containers? Yes/ No(See Comments)
Sufficient labeling on container(s)?  Yes No (See Comments)
Container(s) supplied by CAS?  Yes / No (See Comments)
Custody seal(s) intact? N/A \( \sqrt{Y} \) Yes \( \sqrt{No} \) (See Comments)
Trip Blank(s) received Yes No
If Trip Blank was supplied by CAS, record serial #
Temperature of sample(s)/cooler °C Temp Blank? Y or N (Circle One)
Voa's Marked Preserved? Yes No Filled Properly? Yes No (See Comments)
Preserved Bottles Requiring pH check(s)? Yes Appropriate Preservation? Yes No
RUSH Turn around time? Yes Notified Date & Time
Short Hold-Time Analysis (check all that apply)
ASAP         Res Cl         D.O         Flash         Diss S2-         Ferrous Fe           24HR         pH         Odor         Cr+6           48HR         BOD         Color         MBAS         Nitrate           Nitrite         O-PO4         Sett Sol         Turbidity           72HR         Vapors
Notified Date & Time
Container(s) received and their preservative(s): $-1 \rightarrow -4 = 7 - 40 m_1 \text{ VoAeHa}$ $-5 = 3 - 40 m_1 \text{ VoAeHa}$ $-6 = 2 - 40 m_1 \text{ VoAeHa}$ Comments
Initials, Date, Time LC (1)3/0/29/3/65 r:\sr forms\cooler.doc Rev. 2/25/02



# APPENDIX D

# **LIMITATIONS**



### **LIMITATIONS**

This report, including all attached exhibits, describes results of all or a portion of PW Environmental's investigation into subsurface conditions at the subject site. The findings and recommendations are based on the application of a variety of scientific and technical disciplines to data developed regarding the subject property. The data was developed by observation, sampling, and gathering of information (both documentary and oral) about the property. Some of this data is subject to change over time. Some of this data is based on information not currently observable or measurable, but recorded by documents or orally reported by individuals. The findings and recommendations are based, in part, on application of sampling techniques. Said techniques inherently involve a risk of overstating or understating the presence or severity of contamination. The findings and recommendations are based also on sampling only for the specific contaminants shown in the laboratory reports. The samples taken were not subjected to testing for every contaminant known to the environmental industry, and every biological and/or chemical condition known to the environmental industry.

PW Environmental is not responsible for the accuracy of data not developed by PW Environmental or its agents or subcontractors. PW Environmental is not responsible for overstating or understating the presence or severity of contamination. PW Environmental is not responsible for failing to test for contaminants or biological/chemical conditions it had no reason to know were of concern at the subject site.

PW Environmental has performed this investigation in a professional manner using that degree of skill and care exercised for similar projects under similar conditions by reputable and competent environmental consultants. No warranty, either expressed or implied, was made. PW Environmental is not responsible for the ramifications caused by the concealment, withholding or failure to disclose of relevant information known to anyone contacted by PW Environmental in connection with its work at the subject site. This report and all field data, notes, laboratory test data on which it is based (hereinafter collectively designated "Information") were prepared by PW Environmental solely for the benefit of PW Environmental's client Mr. John Bauer and Ms. Patti Collins. Mr. John Bauer and Ms. Patti Collins have the legal right to release all or a portion of this Information, in its discretion, to third parties. Said third parties may not have access to all information upon which this report was based, nor access to prior reports, nor to other information developed and not placed in any report (hereinafter collectively designated "Additional Information"). The presence or absence of such Additional Information may materially affect the statement contained in this report. Any use or reliance upon this report of Information by a party other than the Mr. John Bauer and Ms. Patti Collins, therefore, shall be solely at the risk of such third party and without legal recourse against PW Environmental, its employees, officers, or directors, regardless of whether the action in which recovery of damages is sought based upon contract, tort, statute or otherwise.